National Committee on Vital & Health Statistics

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Testimony on
Functional Requirements for
the Nationwide Health Information Network

Presentation By:

J. Marc Overhage, MD, PhD, FACP, FACMI
On behalf of the Connecting for Health (CSC) NHIN Consortium
President and CEO, Indiana Health Information Exchange
Professor of Medicine, Indiana University School of Medicine
Director, Regenstrief Institute
Indianapolis, IN
Telephone: (317) 630-7070
Facsimile: (317) 630-6962
E-mail: moverhage@regenstrief.org
URL: www.regenstrief.org

Good Morning and thank you for the opportunity to testify. My name is Marc Overhage and I am part of the Connecting for Health (CSC) NHIN Consortium. Connecting for Health is a public-private collaborative of over 100 organizations representing all the points of view in healthcare that provides a neutral forum to catalyze changes on a national basis to create an interconnected, electronic health information infrastructure to support better health and healthcare. The collaboration was founded and is supported by the Markle Foundation with additional support from the Robert Wood Johnson Foundation. Our NHIN consortium builds on the work that Connecting for Health as been doing over the last several years including the Common Framework. The Common Framework is the minimum necessary set of rules or protocols for *everyone* who shares health information to follow. It is important because is helps organizations overcome the barriers without "reinventing the wheel" and enables nationwide interoperability thereby avoiding isolated islands of information. At the same time it builds the trust which is critical for progress.

Connecting for Health has identified a series of technical principles that guide our work.

Connecting for Health Technical Principles

- Make it "Thin"
- Avoid "Rip and Replace"
- Separate Applications from the Network
- Decentralization
- Federation
- Flexibility
- Privacy and Security
- Accuracy

As we developed our functional requirements for the Nationwide Health Information Network, out "Make it thin" and "Decentralization" principles led us to minimize the number of requirements placed on the "network". At the same time, we had to balance the requirement to "Avoid rip and replace" which dictated that the applications that are running to support healthcare today had to be incorporated into the NHIN.

Our consortia submitted approximately 150 edge and 50 network functional requirements

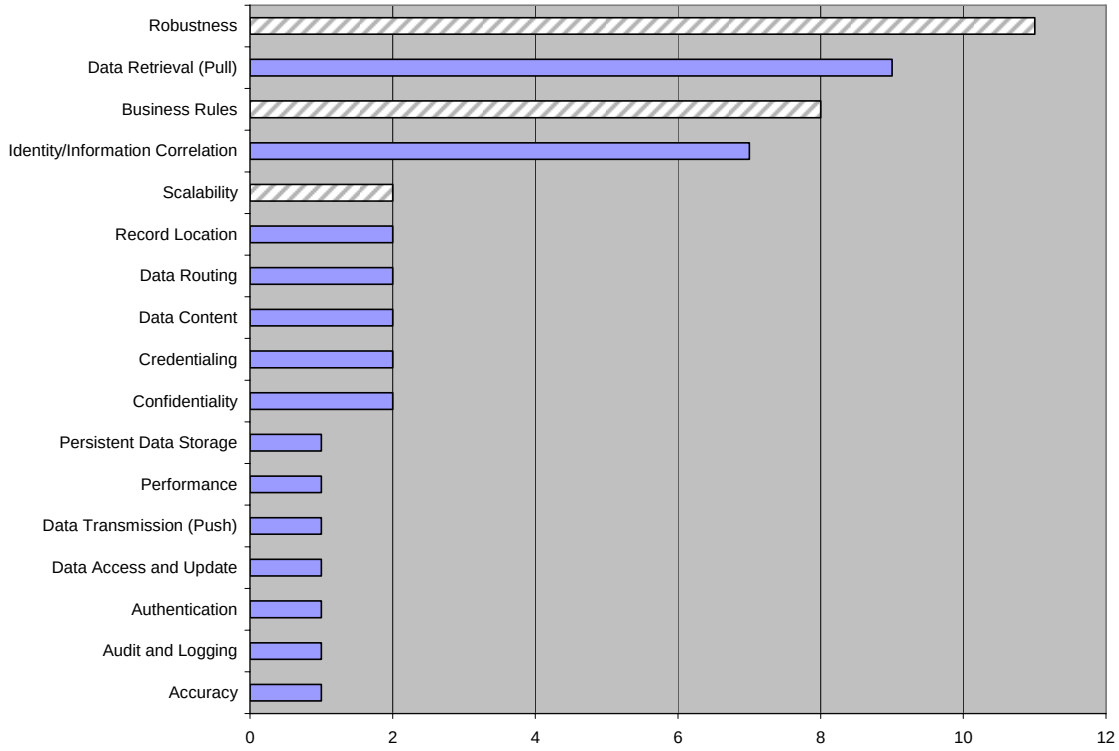

Figure 1 – NHIN network functional requirements

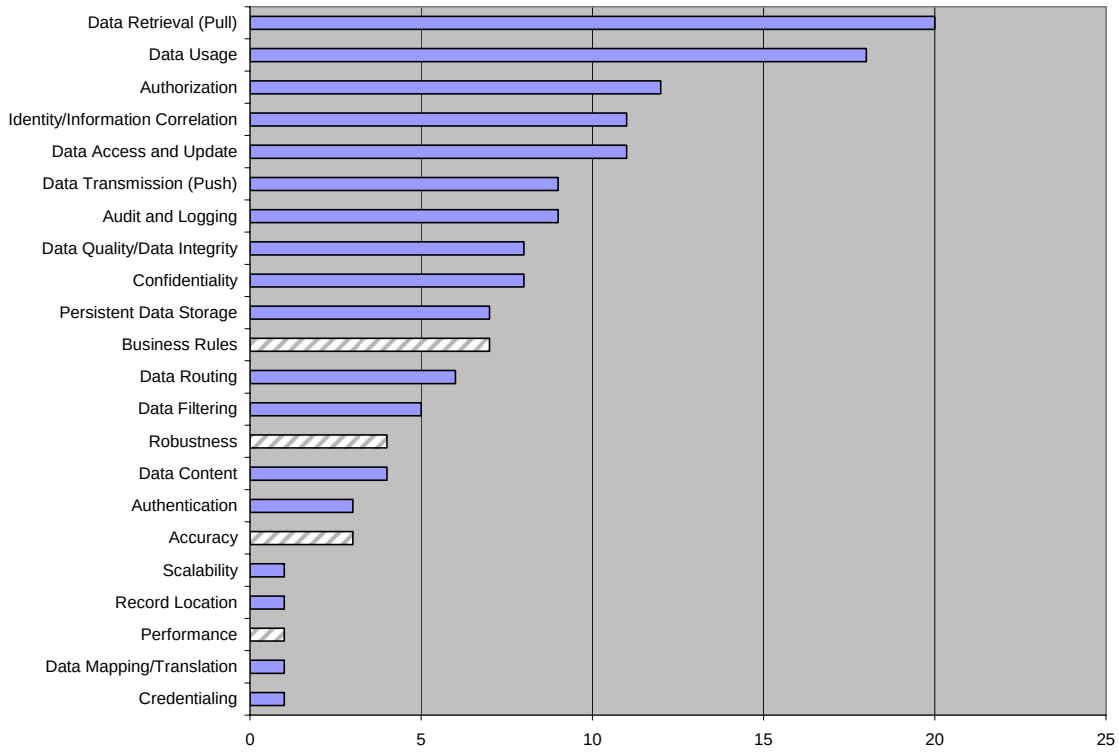

Figure 2 -- NHIN edge system functional requirements

We have obviously chosen to impose more requirements on the edge systems but are quite basic. For example:

CSC-ALL-650	Data Retrieval (Pull)	Repositories	May	Accept queries for Health Data, from authorized providers of care	Edge
CSC-ALL-660	Data Retrieval (Pull)	Repositories	Should	Return Health Data in response to authorized queries.	Edge

We believe that many if not all of these requirements can be met using existing systems. In fact, essentially the same team has already demonstrated in our Connecting for Health prototype how this can be done in three very different markets with three different technology bases. For example, in Massachusetts they used a "gateway" server which was tightly bound to existing edge applications to implement the necessary functionality. In Indiana and California, these functions were provided by a centrally managed resource that the edge applications could take advantage of. These approaches are possible because existing edge applications implement standards based functions through messaging or application programming interfaces that expose the necessary functionality. In Indiana, for example, we rely heavily on existing edge applications ability to produce and consume HL7 Version 2.x messages which provide the data and functionality necessary. In addition, many of these requirements already exist for operational edge applications – they have to provide this functionality for the current usage. For example, edge applications must provide a user authentication function – of course, nearly all clinical systems already provide user authentication. So our focus can be on those

functional requirements that are new or modified. This approach avoids a need to "rip and replace" existing edge applications at the expense of a modest amount of work to create gateway or centrally managed services. We are also pleased that this approach seems to accommodate innovation at the edges.

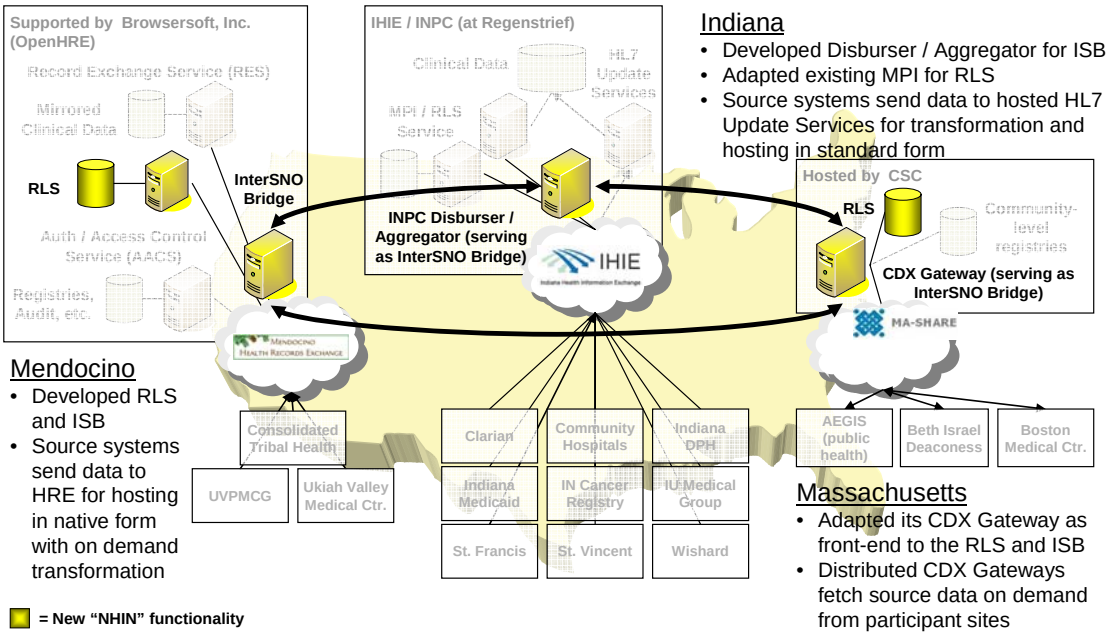

Figure 3 -- Overview of how the Connecting for Health model was implemented in three markets illustrating how existing edge systems can be incorporated.

The functional requirements for the network are, be design, quite modest. At a nationwide level, the ability to authenticate and authorize sub-network organizations (SNO) so that they can be accessed via functions provided through the ISB or Inter-SNO Bridge requires only a few functions.